

COAL GENERAL PERMIT OVERVIEW

Western Kentucky (KYGW40000)



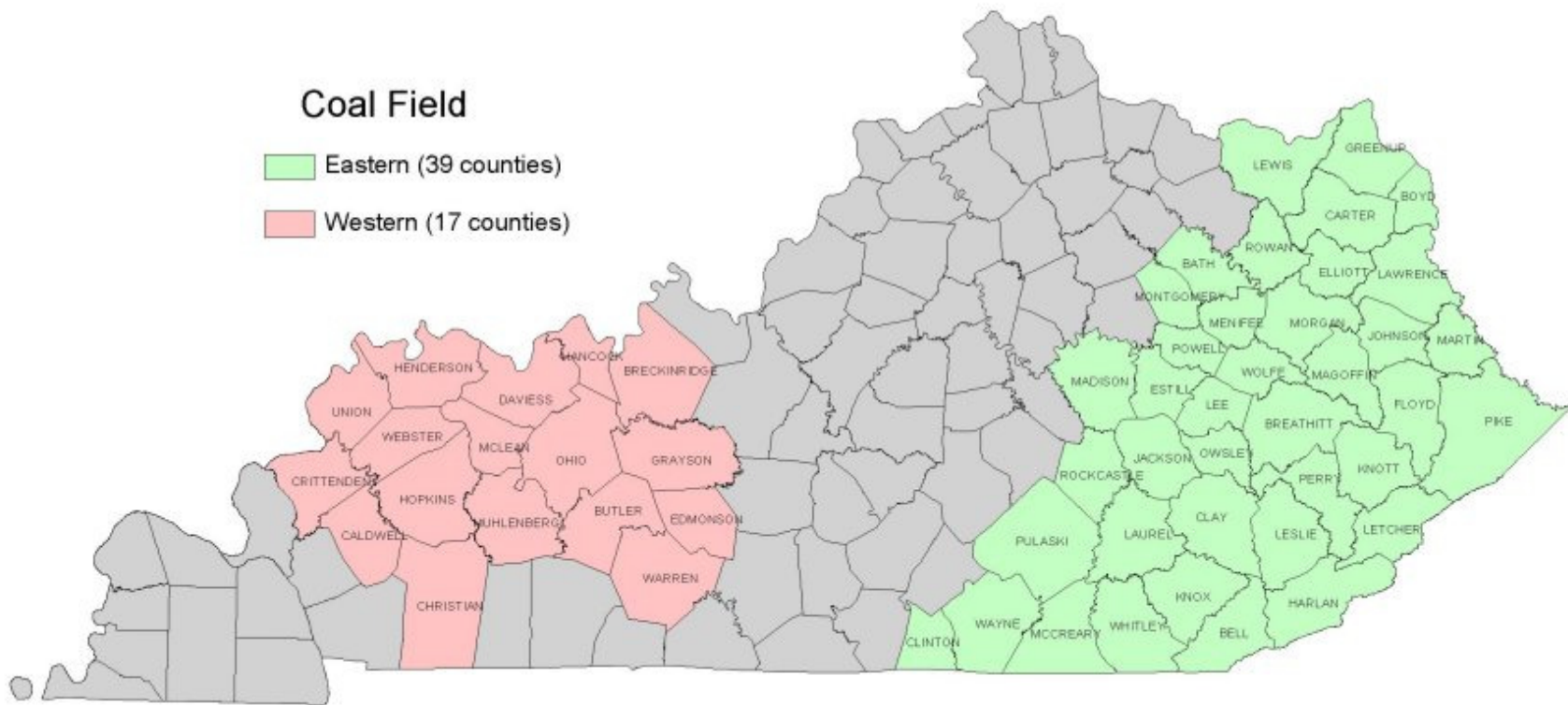
Coverage

Kentucky Coal Counties

Coal Field

Eastern (39 counties)

Western (17 counties)



Eligibility Requirements

- Have obtained or in the process of obtaining a permanent program SMCRA permit from DNR
- Physically located in Western KY coalfield
 - Breckinridge, Butler, Caldwell, Christian, Crittenden, Daviess, Edmonson, Grayson, Hancock, Henderson, Hopkins, McLean, Muhlenberg, Ohio, Union, Warren and Webster Counties
- Do not have a continuous discharge (i.e. a discharge that occurs without interruption or has an average discharge duration of 96 hours or more)



Exclusions

- Coal mining and/or processing operations that directly discharge to or propose to directly discharge to:
 - “Impaired Water” for pollutants of concern associated with such activities and for which an approved Total Maximum Daily Load (TMDL) has been developed,
 - A CAH
 - An OSRW that supports a federally listed Threatened or Endangered (T&E) species,
 - An Outstanding National Resource Water (ONRW)
- New or expanded discharge within 5 miles upstream of an existing domestic water supply intake (surface intake)
- DOW determines is more appropriately addressed by an individual permit



Effluent Limitations Categories

- Non-reclamation areas
 - Non-reclamation area drainage includes drainage from coal preparation plants, coal preparation plant associated areas, the underground workings of an underground mine both active and post mining, and active surface mine drainage.
- Reclamation areas
 - Reclamation areas are the surface areas of a coal mine which have been returned to the required contour and on which revegetation, specifically seeding or planting work has commenced.
- Sanitary wastewaters – indirect discharges
 - Wastewater treatment plant discharges to a sediment control basin or other treatment system prior to discharging to receiving water
- Sanitary wastewaters – direct discharges
 - Wastewater treatment plant discharges directly to receiving water



Effluent Parameters

- Non-reclamation Areas (active mining (surface and underground), coal preparation plants & associated areas)
 - Flow, TSS, Fe, Mn, pH, Acute WET, Specific Conductivity, SO₄, Se, Se Fish Tissue, and Precipitation Volume
- Reclamation Areas
 - Flow, SS, pH, Specific Conductivity, SO₄, and Precipitation Volume
- Sanitary Indirect Discharge
 - Flow, BOD₅, and TSS
- Sanitary Direct Discharge
 - Flow, CBOD₅, TSS, NH₃N, E. Coli, DO, TRCl, and pH

Total Recoverable Iron

- Monthly Average 3.0 mg/l NSPS
- Daily Maximum 4.0 mg/l WQBEL
- Only New Source Performance Standards (NSPS) have been included in this permit for iron. The Best Practicable Control Technology Currently Available (BPT) and the Best Available Technology Economically Achievable (BAT) requirements for existing sources have not been included to simplify the permit. DOW has elected not include these limitations due to the new source determination dates for: (1) coal preparation plants (January 31, 1982) and the initiation or major alteration of coal mining activities (May 4, 1984). Permittees with operations that can qualify as an existing source are required to obtain an individual KPDES permit in order to avail themselves of these limitations.
- If discharge is to a water body that is impaired for iron an individual permit is required.



Definitions of Existing, New and Expanded Facilities

- **Existing facilities** are those facilities that were permitted by DOW prior to the effective date of coverage
- **New facilities** are those facilities that commence after the effective date of this permit and include the following:
 - New surface mining areas draining to in-stream sediment control structure(s);
 - A new coal preparation plant; or.
 - A new underground mine is an underground mine that has a surface discharge.
- **Expanded facilities** are existing facilities where one or more of the following occur after the effective date of this permit:
 - Expanded active surface mining areas draining to an in-stream sediment control structure include:
 - new acreage (greater than 10 % of the originally permitted acreage not to exceed 20 acres) draining to an existing in-stream sediment control structure, or
 - a new fill, or the enlargement of an existing fill over its original design by 10 % or greater ;
 - A coal preparation plant where a new slurry impoundment or enlargements of an existing slurry impoundment over its original design by 10 % or greater (acreage);
 - An underground mine the expansion of which necessitates a new surface discharge.



WET – Permit Requirements

- Whole Effluent Toxicity (WET) is used in this permit, to determine compliance with narrative water quality standards.
- Existing facilities must initiate testing as soon as possible but no later than January 1, 2016
- New and expanded facilities must initiate testing with 30 days of the effective date of coverage
- Acute WET testing required for all Non-reclamation Area discharges



Selenium Requirements

- Existing facilities must initiate testing as soon as possible but no later than January 1, 2016
- New and expanded facilities the condition is effective within 30 days of the effective date of coverage
- Monthly average trigger of 5 µg/l, once tripped requires permittee to collect fish specimens to conduct fish tissue analysis for selenium residue.
- If fish tissue collection and analysis is required, the whole body dry weight limitation is 8.6 mg/Kg
- If no fish tissue collected, the monthly average trigger of 5 µg/l becomes the limit
- Daily maximum effluent limit is 20 µg/l



Fish Tissue Sampling Requirements

- Each time the 5 µg/l monthly average is tripped, the permit must collect fish specimens for tissue analysis the following calendar month.
- Sampling for fish begins within 50 feet of outfall and proceeds downstream in 100 meter reaches up to a maximum of 4 reaches.
- Once sufficient fish specimens are collected, the tissue is analyzed and results reported the following calendar month.
- If the analysis results exceed the 8.6 mg/Kg dry weight the permittee has violated the permit.
- If insufficient fish can be collected within the 4 100 meter reaches, then the 5 µg/l becomes an effluent limitation that has been violated.



Monitoring Frequency

- Non-reclamation Areas (active mining (surface and underground), coal preparation plants & associated areas)
 - 2/Month - Flow, TSS, Fe, Mn, Specific Conductivity, SO₄, Se, and pH
 - 1/ Quarter – Acute WET
 - Conditional – Se Fish, Precipitation Volume
- Reclamation Areas
 - 1/ Month - Flow, SS, Specific Conductivity, SO₄, and pH
 - Conditional – Precipitation Volume
- Sanitary Indirect Discharge
 - 1/Month - Flow, BOD₅, and TSS
- Sanitary Direct Discharge
 - 1/Month - Flow, CBOD₅, TSS, NH₃N, E. Coli, DO , TRCl, and pH

Shared Ponds

- When a pond is shared between two facilities that have different types of drainage, i.e. active mining versus reclamation both facilities are subject to the active mining effluent requirements pursuant to 40 CFR 434.61.
 - **§434.61 Commingling of waste streams.**
 - Where waste streams from any facility covered by this part are combined for treatment or discharge with waste streams from another facility covered by this part, the concentration of each pollutant in the combined discharge may not exceed the most stringent limitations for that pollutant applicable to any component waste stream of the discharge.
- Reclamation limits for the pond will not be available until both facilities send reclamation area drainage to that pond.
- The coverage letters for both facilities will have to reflect the shared status and the assigned effluent limitations.

Substantially Identical Outfalls (SIOs)

- Substantially identical outfalls (SIOs) are outfalls that receive drainage from the same type of activities, utilize the same type of sediment control structures, are within the same watershed, are expected to produce similar effluents and would be subject to the same effluent limitations.
- In such cases, DOW may authorize the permittee, upon request, to monitor representative outfalls for compliance purposes.
- In such cases a Compliance Representative Outfall (CRO) will be designated



SIOs Demonstration

- Requests to monitor an outfall that is representative of two or more substantially identical outfalls, shall document the following:
 - Location of each of the substantially identical outfalls;
 - The KPDES permit outfall number assigned to each outfall;
 - The types of activities taking place within the contributing drainage area of each outfall;
 - Description of the sediment control structures for each outfall;
 - The expected frequency and volume of flow for each outfall;
 - Why the permittee expects the outfalls to produce similar effluents;
 - The outfall the permittee requests as the representative outfall; and
 - The basis for selecting the representative outfall.
- Requests shall be made using DOW's electronic web based eNOI-KYG04, available on KDEP's forms library site at: <http://dep.ky.gov/formslibrary/Pages/default.aspx>.



SIOs - Implementation

- Implementation
 - When utilizing a representative outfall for substantially identical, outfalls the following conditions apply:
 - Representative outfalls are KPDES permit specific and cannot be used for reporting compliance samples on other KPDES permits;
 - DMRs for each outfall substantially identical to the representative outfall shall be submitted utilizing the analytical data from corresponding representative outfall;
 - Corrective actions or additional monitoring triggered by monitoring results from the representative outfall shall be implemented at each of the substantially identical outfalls;
 - No Discharge (NODI) codes may be use only if the representative outfall does not discharge.

Transitioning to Reclamation Area Status

- To transition from active mining effluent limitations and monitoring requirements to reclamation area effluent limitations and monitoring requirements the following conditions apply:
 - On a pond by pond basis
 - There is no drainage from:
 - Active surface mine areas,
 - Underground workings of underground mines (active or post mining),
 - Coal preparation plant or coal preparation associated areas;
 - The effluent from the sediment control structure has been substantially in compliance with the water quality-based effluent limitations (WQBELs).



Alternate Precipitation Effluent Limitations (APELs)

- APELs are alternate precipitation effluent limitations that may be substituted, on a case-by-case basis for the following Technology-Based Effluent Limitations (TBELs):
 - Monthly Average Total Recoverable Iron (TRFe)
 - Total Recoverable Manganese (TRM)
 - Total Suspended Solids (TSS)
 - Settable Solids (SS)
- They are a function of the size of the precipitation event and the type of drainage received by the sediment control structure. The precipitation volume is the total volume of rainfall or equivalent snow melt that has occurred during the 24 hours preceding the commencement or increase in the discharge (qualifying event).
- To apply must report on DMR the precipitation volume of the qualifying event



APELs

TABLE 1.

ALTERNATE PRECIPITATION EFFLUENT LIMITATIONS

Source Determining Effluent Limits	Precipitation Volume (PV) inches of rainfall	
	$0.01 < PV \leq 4.8$	$PV > 4.8$
UGNC	Not Applicable	Not Applicable
UGC	Not Applicable	TRM, TSS not required
CSMD	Not Applicable	TRM, TSS not required
RA	Not Applicable	SS not required
NSMD	TRM not required SS (0.5 ml/l) replaces TSS The monthly average concentration for TRFe shall not exceed 3.5 mg/l	SS, TRM, TSS not required The monthly average concentration for TRFe shall not exceed 3.5 mg/l
PPAA	TRM not required SS (0.5 ml/l) replaces TSS The monthly average concentration for TRFe shall not exceed 3.5 mg/l	SS, TRM, TSS not required The monthly average concentration for TRFe shall not exceed 3.5 mg/l

APEL Codes

- **UGNC** - Discharges from underground workings of underground mines **not commingled**. “Commingled” means two or more types of drainage that are combined for treatment or discharge.
- **UGC** - Discharges from underground workings of underground mines **commingled**. “Commingled” means two or more types of drainage that are combined for treatment or discharge.
- **CSMD** - Controlled surface mine drainage (except steep slope and mountaintop removal). “Controlled surface mine drainage” means any surface mine drainage that is pumped or siphoned from the active mining area. “Steep slope” means surface mining activities conducted on slopes greater than 20%. “Mountaintop removal” means surface coal mining and reclamation operations that remove entire coal seams running through the upper fraction of a mountain, ridge, or hill by removing all of the overburden and creating a level plateau or gently rolling contour with no highwalls remaining.
- **PPAA** - Discharges from coal preparation plant and coal preparation plant associated areas (excluding coal refuse disposal piles). “Coal preparation plant” means a facility where coal is subjected to cleaning, concentrating, or other processing or preparation in order to separate coal from its impurities and then loaded for transit to a consuming facility. Includes all pipes, channels, basins, tanks and all other structures and equipment that convey, contain, treat, or process any water that is used in the coal preparation plant (including slurry sediment control structures, freshwater sediment control structures, and conveyances). “Coal preparation associated areas” means coal preparation plant yards, immediate access roads, coal refuse piles, and coal storage piles and facilities.
- **RA** - Reclamation Areas. “Reclamation area” means the surface area of a coal mine which has been returned to required contour and on which revegetation (specially, seeding or planting) work has commenced.



BMP Plan Requirements

- Standard Language

Discharge Monitoring Reports (DMRs)

- electronic submission using EPA tool NetDMR only
- Submission shall begin with the initial DMR upon effective date of new or renewal of coverage.
- Permits provide lists of No Discharge (NODI) Codes

TABLE 1.

NODI Code	Definition
2	Operation Shutdown
5	Frozen Conditions
9	Conditional Monitoring – Not Required This Period
C	No Discharge
F	Insufficient Flow For Sampling
I	Land Applied
J	Recycled –Water-Closed System
K	Natural Disaster
N	Not Constructed
Q	Not Quantifiable
R	Administratively Resolved
V	Weather Related



Notice of Intent (NOI)

- Electronic Notice of Intent
- eNOI-KYG04
 - Web based submission of NOI only (No paper)
 - Form is interactive will expand to allow additional data to be entered
 - Effluent sample for coverage required
 - Renewal coverages within preceding 4 years from date of submission
 - New or expanded coverages with preceding 12 months from date of submission
 - Attachments include Mining Reclamation Plan (MRP) Map, KPDES map, justification for representative outfalls, Socioeconomic Demonstration and Alternatives Analysis (SDAA) for new or expanded facilities
 - Electronic fee payments only (no paper checks)



Notice of Intent Deadlines

- eNOI Submission Deadlines
 - For new facilities a minimum of 90 days prior to commencement of discharge
 - For modification of existing coverages a minimum of 90 days prior to modification of facility
 - Renewal coverages within 180 days of the effective date of permits
- New or expanded facilities given priority
- Existing coverages under KYG040000 will continue in effect until coverage under KYGE40000 or KYGW40000 is granted



Public Participation

- To address this issue DOW is implementing the following steps.
 - An e-mail will be sent to DOW's listserv members when an eNOI is first received. There is no comment period associated with this notification.
 - For new and expanded operations the noticing of the SDAA will continue as it has been done under KYG040000
 - An e-mail will be sent to DOW's listserv members when a cover letter has been issued for any new or modified coverage.



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